

EMERGENCY Chapter NR 320

BRIDGES AND CULVERTS IN OR OVER NAVIGABLE WATERWAYS

NR 320.01 Purpose. The purpose of this chapter is to establish reasonable procedures and limitations for exempt activities, general permits and individual permits for placement of bridges and culverts in or over navigable waterways as regulated under s. 30.123, Stats., in order to protect the public rights and interest in the navigable, public waters of the state as defined in s. 30.10, Stats.

NR 320.02 Applicability. (1) BRIDGES AND CULVERTS PLACEMENT. This chapter applies to construction, placement and maintenance of bridges and culverts in or over navigable waterways as regulated under s. 30.123, Stats. Any person that intends to construct, place or maintain a bridge or culvert in or over any navigable waterway shall comply with all applicable provisions of this chapter and any permit issued under this chapter.

(2) MUNICIPAL HIGHWAY BRIDGES. (a) Municipalities are not required to obtain a permit or approval pursuant to s. 30.10, 30.12 or 31.23, Stats., prior to constructing a municipal highway bridge. However, municipal highway bridges cannot obstruct navigation and must meet local flood plain zoning requirements.

(b) Municipalities may submit highway bridge plans and pertinent flood plain survey data to the department to determine if the project will conform to clearance and flood plain requirements.

(3) STATE HIGHWAY BRIDGES. State highway bridges are not subject to the permit requirements under s. 30.12, Stats. However, such bridges cannot obstruct navigation. Also intrastate and interstate bridges constructed pursuant to ss. 84.11 and 84.12, Stats., are subject to the control and supervision over the navigable waters of the state conferred by law upon the department. State highway bridges constructed pursuant to ss. 84.11 and 84.12, Stats., will be reviewed and approved by the department pursuant to an appropriate interagency agreement entered into by the department of transportation and the department of natural resources.

NR 320.03 Definitions. (1) "Area of special natural resource interest" has the meaning in s. 30.01(1am), Stats., and as identified by the department in s. NR 1.05.

Note: "Area of special natural resource interest" means any of the following:

(a) A state natural area designated or dedicated under ss. 23.27 to 23.29.

(b) A surface water identified as a trout stream by the department under NR 1.02(7).

(bm) A surface water identified as an outstanding or exceptional resource water under s. 281.15.

(c) An area that possesses significant scientific value, as identified by the department in NR 1.05.

Information and lists can be obtained by contacting the department, or found on the department's website at www.dnr.wi.gov, under the topic "Waterway and Wetland Permits".

(2) "Backwater" means the increase in the natural flood elevation which results from a bridge and any associated road fills.

(3) "Bridge" means any private or public structure except municipal highway bridges constructed in or over a navigable waterway to provide a walkway or roadway for pedestrians, animals or vehicles.

(4) "Channel" means a natural or artificial water course with defined bed and banks to confine and conduct the normal flow of water.

(5) "Clearance" means the distance between the inside top of a culvert or the bottom of the lowest member of the bridge span and the elevation of the ordinary high watermark of the waterway.

(6) "Department" means the department of natural resources.

(7) "Highway" or "public highway" has the meaning in s. 340.01(22), Stats.

(8) "Municipal highway bridge" means any city, town, village or county owned structure built in or over a navigable waterway for public highway purposes.

(9) "Navigable waterway" means any body of water with a defined bed and bank, which is navigable under the laws of the state. In Wisconsin, a navigable body of water is capable of floating the lightest boat or skiff used for recreation or any other purpose on a regularly recurring basis.

(10) "Ordinary high watermark" means the point on the banks or shore up to which the presence and action of water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation or other easily recognized characteristics.

(11) "Perched culvert" means a culvert where the bottom outlet elevation is greater than the water level elevation, thereby effectively eliminating fish migration and fish passage.

(12) "Regional flood" means a flood representative of large floods known to have generally occurred in Wisconsin or which may be expected to occur on a particular lake, river or stream once in every 100 years.

(13) "Replacement" means a degree of structural changes to a bridge or culvert by which some or all of the bridge or culvert is being removed or recreated.

(14) "Riprap" means a layer or layers of rock, including filter material, placed on the bed and bank of a navigable waterway to prevent erosion, scour or sloughing of the existing bank.

NR 320.04 Bridge clearance over navigable waterway. (1) New bridges or replacements of existing bridges spanning navigable waterways, shall, except as set forth herein, maintain a clearance of not less than 5 feet.

(2) The department may require clearance of more than 5 feet when the waterway has been or is likely to be navigated when it is above its ordinary high watermark elevation or when it is used by watercraft or snowmobiles requiring greater clearance.

(3) The department may allow less than 5 feet of clearance for permanent bridges when:

- (a) The waterway is known to have little or no navigation or snowmobile use; and
- (b) The waterway is not anticipated to have navigational use by other than lightweight craft; and
- (c) The owner provides a portage over or around the bridge; and
- (d) The reduced clearance would not be detrimental to the public interest.

(4) The department may allow less than 5 feet of clearance for temporary bridges not meeting the criteria set forth in sub. (3) (a) through (d) if:

- (a) The owner of the bridge has entered into a written agreement with the department requiring installation and removal of the bridge; and
- (b) The stream is not appreciably used by snowmobiles during the period of time when the bridge will be in place.

(5) The conditions in the above-stated agreement shall be based on the navigational history and use of the stream. The department may modify the dates in the agreement or require removal if changed navigational uses so warrant. Repeated failure of the owner to comply with the installation dates shall render the bridge approval void.

NR 320.05 Bridge flood flow requirements. (1) New bridges or replacements of existing bridges shall conform with the flood flow requirements of ch. NR 116. Notwithstanding any other provision of this section to the contrary, any bridge crossing a waterway shall comply with any applicable local flood plain zoning ordinance.

(2) Those bridges meeting the criteria set forth in s. NR 320.06 (2) (a) through (d) are deemed to be in conformance with ch. NR 116, without the need for the submission of detailed profiles, cross-sections and hydraulic calculations.

NR 320.06 Bridge plan and information requirements. (1) Plans and specifications for the following classes of new or replacement bridges shall contain the following information:

- (a) Bridges estimated to cost in excess of \$10,000 exclusive of design costs:
1. A location map for the proposed bridge; and
 2. Construction plans indicating the materials to be used; and
 3. The maximum anticipated loading that the bridge will be subject to; and
 4. Proposed clearance for the bridge; and
 5. Elevations and dimensions of any approach fill; and
 6. Calculation of the regional or 100 year flood magnitude (cubic feet per second) in accordance with department approved methods; and
 7. Calculation of the regional flood elevation which would be attained under natural conditions uninfluenced by any existing bridge and road fill; and
 8. Calculation of the backwater or increase in regional flood elevation which would be caused by the bridge and any associated road fill.

- (b) Bridges estimated to cost \$10,000 or less exclusive of design costs:
1. Paragraph (a) 1. through 5.; and
 2. Cross-sectional profiles of the flood plain, as necessary, to determine the natural regional flood elevation. The cross-sectional profiles shall indicate existing natural ground elevations and water surface elevations.

(2) In lieu of sub. (1) (a) or (b), the plans for any new or replacement bridge spanning a navigable stream that will only affect rural areas need only contain information required in sub. (1) (a) 1. through 4. if the plans also show conformance with the following criteria:

- (a) All approaches for the bridge will be constructed so there will be no increase in elevation above existing natural ground elevation (if approach ramps are required at the bridge they shall not exceed one foot in elevation to meet the bridge deck, nor be more than 15 feet in length);
- (b) The bridge will completely span the stream from top of channel to top of channel;
- (c) At least one end of the bridge structure will be firmly anchored in such a manner that the bridge will not be transported downstream during flood conditions; and
- (d) The owner will submit a notarized statement assuming all responsibility and liability for any direct or indirect damages which may result from a bridge approved under this section.

NR 320.07 Bridge enforcement. (1) **EXISTING PRIVATE BRIDGES AND MUNICIPAL NONHIGHWAY BRIDGES.** An enforcement investigation shall be commenced by the department, upon receipt of a written complaint, for any private bridge or municipal nonhighway bridge in existence on January 1, 1977 which has not received a necessary permit or approval from the department. After such investigation the department shall commence an enforcement action if it determines that environmental damage has resulted from the construction or maintenance of the bridge or if the owner of the bridge fails, after written request, to bring the bridge into compliance with the standards set forth in this chapter.

(2) **MUNICIPAL HIGHWAY BRIDGES.** Upon receipt of written complaint the department shall investigate the construction or maintenance of any municipal highway bridge. In evaluating such complaints the department will apply the principles set forth in *Capt. Soma Boat Line, Inc. v. City of Wisconsin Dells* (56 Wis. 2d 838 (1973)) to determine what course of action it will follow in the case. The department shall apply the clearance standards set forth in this chapter in determining whether a municipal highway bridge constitutes an obstruction to navigation.

NR 320.08 Bridges and culverts. (1) **EXEMPTIONS.** (a) *Procedures.* Exemptions shall be processed according to the procedures in ch. NR 310.

(b) *Applicable activities.* A replacement of a culvert that meets all the standards in par. (c) shall be exempt under s. 30.123(6)(e), Stats. A replacement of a previously permitted culvert that meets all the standards in par. (d) shall be exempt under s. 30.12(6)(d), Stats.

(c) *Standards to replace a culvert that does not exceed 24-inches in diameter.* 1. The culvert may not be located in an area of special natural resource interest as defined in s. 30.01(1am), Stats., and identified by the department in s. NR 1.05, or where there are public rights features as defined in s. NR 1.06.

2. The replacement culvert shall be an in-kind replacement of a single culvert of the same type, of equal or smaller diameter, and of equal or shorter length of culvert that is being replaced.

3. The stream may not have a base flow of more than 4 cubic feet per second to ensure that a 24-inch culvert adequately passes stream flow and is not likely to create a ponded condition upstream.

Note: If the culvert or roadway is being replaced because it has washed out, overtopped or has been eroded around, then a 24 inch culvert is likely inadequate unless the damage occurred during a regional flood.

4. Culvert placement and installation shall mimic the natural stream and gradient above and below the culvert channel, not to exceed a 3% slope. Ponding upstream or perching or plunge pool conditions downstream indicate that a culvert is not in compliance with this condition.

Note: A culvert which is part of a structure that functions as a dam requires an approval or permit under ch. 31, Stats.

5. Both ends of the culvert shall be installed so 25% of the diameter of a round culvert or 25% of the height of a box culvert lies below the bed of the waterway.

6. Culvert inlets may not be capped with screens, bars or any other means, with the exception of beaver control procedures, that prevents movement of fish or wildlife or collects debris. Culvert openings shall be inspected at least once a year for debris and any obstructions shall be removed.

7. Culverts shall be long enough so road fill does not extend beyond the ends of the culvert. The culvert shall extend at least one foot beyond the fill. Culvert ends shall be protected with 3- to 12-inch diameter riprap extending horizontally 18 inches from the end of the culvert.

8. Fill material shall be firmly compacted around the culvert. To prevent crushing, the top of the culvert shall be covered with fill to a depth of at least 12 inches. Fill material used shall be free of fines, sediment, soil, pollutants, contaminants and other waste materials.

9. Dredging under 30.20 (1g)(b)1., Stats., and deposition of sand, gravel or stone on the stream bed under s. 30.12(1g)(a), Stats., may be associated with the replacement of a culvert provided dredging is limited to the volume necessary to bury the culvert as required in subd. 5 and the deposit is limited to the area immediately underneath or within 2 feet of the culvert.

10. Culvert replacement is prohibited from March 15 to June 1 annually to minimize adverse impacts on fish movement, fish spawning, egg incubation periods and high stream flows.

11. Erosion control measures shall meet or exceed the standards in the most current version of the Wisconsin Construction Site Best Management Practices Handbook.

Note: Information on how to obtain this publication can be found by contacting the department or found on the department's website at www.dnr.wi.gov, under the "Runoff Management" program.

Note: The replacement culvert may not impair drainage or cause backwater on the property of an upstream property owner without written consent or appropriate legal arrangements.

Note: Equipment shall be operated from the streambank only (see s. 30.29, Wis. Stats.).

Note: A permit is required under s. 30.19, Wis. Stats. and NR341 if land disturbance or excavation exceeds 10,000 square feet on the bank of the navigable waterway.

(d) *Standards to replace a previously permitted culvert.* 1. A culvert that is authorized by a permit issued under s. 30.12 or 30.123, Stats., may be replaced provided the construction, placement and maintenance will comply with the same conditions of the original permit.

2. Both ends of the culvert shall be installed so 25% of the diameter of a round culvert or 25% of the height of a box culvert lies below the bed of the waterway.

3. Erosion control measures shall meet or exceed the standards in the most current version of the Wisconsin Construction Site Best Management Practices Handbook.

Note: Information on how to obtain this publication can be found by contacting the department or found on the department's website at www.dnr.wi.gov, under the "Runoff Management" program.

4. A deposit of sand, gravel or stone under s. 30.12(1g)(a), Stats., may be associated with the replacement of a culvert provided the deposit is limited to the area immediately underneath or within 2 feet of the culvert, and is less than 2 cubic yards.

5. Dredging under s. 30.20(1g)(b)1., Stats., is allowed for the replacement of a culvert provided it is limited to the volume necessary to bury the culvert as required in subd. 2.

6. Culvert replacement under this paragraph may not occur more than once every 5 years.

(e) Activities that do not meet the standards in par. (c) or (d) or are determined ineligible for an exemption by the department require a general permit or individual permit.

(2) GENERAL PERMITS. (a) *Procedures.* General permits shall be processed according to the procedures in ch. NR 310.

(b) *Applicable activities.* A clear span bridge that meets all the standards in s. NR 320.04 and par. (c) shall be eligible for a general permit under ss. 30.123(7)(a)1. and (b) and 30.206, Stats.

(c) *Clear span bridge standards.* 1. On trout streams, construction or placement is prohibited between September 15 and May 1 of any calendar year.

2. On all waterways that are not trout streams, construction or placement is prohibited between March 15 and June 1 annually.

3. The bridge may only span a portion of a navigable waterway that is less than 35 feet wide, measured from ordinary high water mark to ordinary high water mark.

4. The bridge may not be located on a wild river designated under ch. NR 302, or where similar federal, state or local regulations prohibit the construction.

5. Any grading, excavation and land disturbance shall be confined to the minimum area necessary for the construction and may not exceed 10,000 square feet.

6. Erosion control measures shall meet or exceed the standards in the most current version of the Wisconsin Construction Site Best Management Practices Handbook.

Note: Information on how to obtain this publication can be found by contacting the department or found on the department's website at www.dnr.wi.gov, under the "Runoff Management" program.

7. All equipment used for the project shall be designed and properly sized to minimize the amount of sediment that can escape into the water.

8. Any area where topsoil is exposed during construction shall be immediately seeded and mulched or ripped to stabilize disturbed areas and prevent soil from being eroded and washed into the waterway.

9. When the project is completed and the disturbed areas are adequately stabilized, the silt fencing or similar erosion control measures shall be removed so that the erosion control measures are not a barrier to the movement of wildlife.

10. Construction or placement of the clear span bridge shall minimize the removal of trees, shrubs and other shoreline vegetation above the ordinary high water mark.

Note: Local zoning ordinances may place restrictions on cutting trees in the shoreland zone. The riparian is responsible for ensuring that their project is in compliance with any local zoning requirements.

11. No approach fill shall be placed in any wetland, floodway or below the ordinary high water mark of any navigable waterway. If an approach must be located in a wetland or floodway, it shall be open ramp style construction only.

12. The permittee shall assume all responsibility and liability for any direct or indirect damage caused or resulting from the presence of the bridge and hold the state of Wisconsin, or its employees, harmless.

13. Accumulated brush or debris shall be regularly removed from the bridge.

14. At least one end of the bridge structure shall be firmly anchored in a manner that the bridge will not be transported downstream during flood conditions.

15. The bridge shall completely span the waterway from top of channel to top of channel with no support pilings in the waterway.

16. The bridge shall be of a natural earth tone color so that it minimizes the impact on natural scenic beauty.

17. The permittee shall submit a photograph of the completed project to the department within 10 days of project completion.

(d) Activities that do not meet the standards in par. (c) or a general permit issued by the department shall require an individual permit.

(3) INDIVIDUAL PERMITS. (a) *Procedures.* Individual permits shall be processed according to the procedures in ch. NR 310.

(b) *Applicable activities.* Any bridge or culvert which is not exempt under s. NR 320.08(1), is not authorized by a general permit under s. NR 320.08(2), or is located in an area of special natural resource interest requires authorization by an individual permit under s. 30.123 (8), Stats.

(c) *Standards.* Construction, placement or maintenance of a bridge or culvert which meets the standards in s. 30.123(2), Stats., may be authorized under an individual permit.

NR 320.09 (1) Noncompliance with the provisions of ss. 30.12, 30.123, 30.20 and 30.206, Stats., this chapter, or any conditions of an exemption, general permit or individual permit issued by the department, constitutes a violation and may result in a forfeiture. If the activity is a general permit under s. 30.206, Stats., the failure to follow procedural requirements may not, by itself, result in abatement of the

activity. Unless there is good cause shown, the department shall seek abatement of any activity in violation of ss. 30.12, 30.123, 30.20 and 30.206, Stats.

(2) General permits may not be issued for after-the-fact permit applications. When an after-the-fact permit application has been filed with the department, the department shall follow the procedures in ch. NR 301 for violations.

(3) Any reference in ss. 30.15, 30.292, 30.294 and 30.298, Stats., to any provision of ch. 30, Stats., shall include any rules promulgated under that provision.

(4) No person may place a bridge or culvert in or over a navigable waterway if the activity is not eligible for an exemption, authorized by a general permit or individual permit issued under this chapter, or otherwise authorized under this chapter.